



LIBERO GE

- > 100% calibrated temperature sensor
- > Flight-proof; no DGR declaration required
- > External Pt100 probe

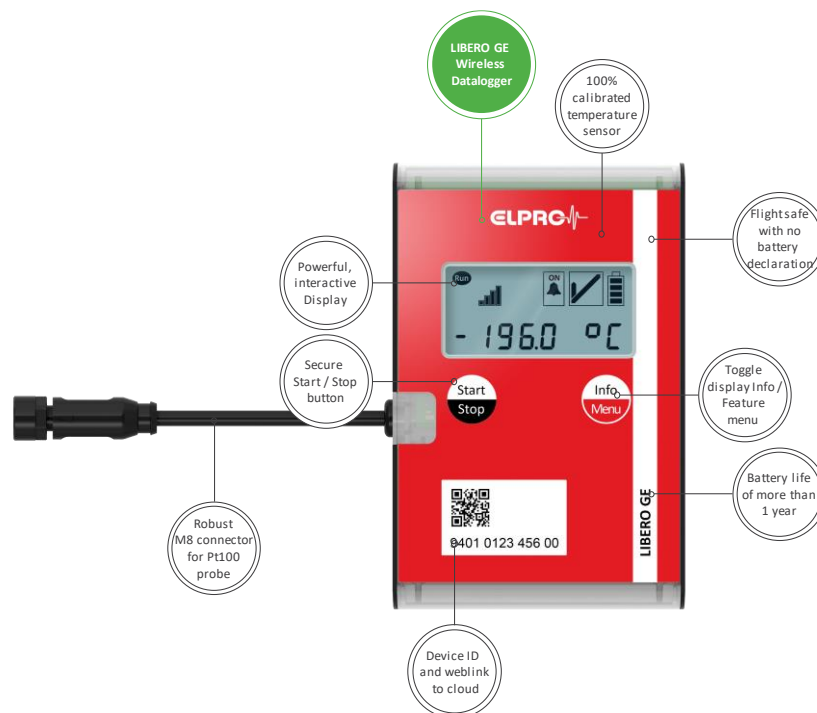


(PRELIMINARY) TECHNICAL SPECIFICATIONS

LIBERO GE

Wireless Data logger with internal sensor and external Pt100 probe

LIBERO GE is the real-time logger that takes your cold chain monitoring to the next level. LIBERO GE covers all kind of applications for transport monitoring and simplifies the shipment process for products with known stability data. The internal temperature sensor is highly accurate and comes as world's first wireless data logger with a 100% sensor calibration. Having an external probe (Pt100 probe with M8 connector for safe temperature data transfer), LIBERO GE covers a wide measurement range from -200 °C..+400 °C and allows also monitoring of ultra-low freezers and cryo containers. LIBERO GE is re-configurable and re-usable with a battery life of more than a year. In addition to temperature, LIBERO GE monitors light, movement / tilt and location of the shipment. LIBERO GE uploads all measured data automatically to a save cloud environment where all shipments are monitored. The automatic flight detection and the abandonment of lithium batteries allows the usage for airfreight without cumbersome dangerous goods declaration. Having a display, LIBERO GE provides full transparency to the user at any time. Up to 16.000 temperature values can be stored on the logger to temporarily buffer measurement data. A robust, lockable bracket is available in addition. At the end of the shipment release products directly based on the OK or ALARM status on the display and download the PDF report from the cloud.



we prove it.

SWISS QUALITY



- > Real-time insights of your valuable shipments on road, air and sea
- > Highly accurate and 100% calibrated temperature sensor
- > Simple and safe in use and application
- > Fully compliant with industry guidelines
- > Compatible with liberoMANAGER cold chain database

Technical Specification LIBERO GE (preliminary)

Type	Wireless Data logger with internal sensor and external Pt100 temperature probe (probe not included)	
Application area	Transport Monitoring, (Cryo / Dry-ice) Container Monitoring	
Recording options and mode	Multi use: start / stop or loop	
Sensors	Temperature sensor External probe (Pt100, requires M8 connector) Geographical location, Light sensor Acceleration sensor (movement/ tilt)	
Measurement range	Measurement range (depending on probe): -200 °C..+400 °C Measurement range of internal sensor: -30 °C..+70 °C	
Measurement accuracy	Internal Sensor ±1.0 °C for -30.0 °C..-20.1 °C ±0.5 °C for -20.0 °C..-0.1 °C ±0.4 °C for 0.0 °C..+65.0 °C ±0.5 °C for +65.1 °C..+70 °C	External Probe (System accuracy*) ± 1.4 °C in the range of -200.0 °C..-100.1 °C (Class B) ± 1.0 °C in the range of -100.0 °C..-50.1 °C (Class B) ± 0.4 °C in the range of -50.0 °C..-10.1 °C (Class A) ± 0.3 °C in the range of -10.0 °C..+25.0 °C (Class A) ± 0.5 °C in the range of +25.1 °C..+100.0 °C (Class A) ± 0.7 °C in the range of +100.1 °C..+200.0 °C (Class A) ± 1.1 °C in the range of +200.1 °C..+400.0 °C (Class A) *Includes data logger and external Pt100 probe of stated class
Resolution	0.1 °	
Measurement interval	1 to 60 minutes, user programmable	
Cellular network	LTE-M and NB-IoT (Global Roaming)	
Communication interval	1 to 24 hours, user programmable, event-driven immediate communication (e.g. excursion, last will)	
Measurement capacity	16'000 measurement values	
Battery life	14 months (+ 12 months shelf life) Use below 0 °C and above +40 °C over a longer period of time and / or intensified communication behavior (e.g. bad connection) can shorten battery life	
Battery type	Alkaline batteries (non-replaceable), exempt from DGR declaration	
Configurable alarms	8 temperature & alarm zones with single or cumulative delays 2 temperature thresholds with alarm delay Alarm on MKT / duration / runtime Occurrence for light, geo-position and movement / tilt	
Start-up Delay	User configurable based on time, temperature or button	
Display	Multifunction LCD, size: 42 × 20 mm	
Certificate	Calibration certificate (3-points); additional calibration points or ISO 17025 certification available Validation Certificate	
Traceability	Unique ID number (traceable to component level)	
Reporting	Real-time visibility and notification about events or excursions via an ELPRO cloud solution Secure and compliant archiving of all data in ELPRO cloud (complies with FDA 21 CFR Part 11) Compatible with liberoMANAGER, ELPRO's cold chain database to store shipment reports and results, analyze shipments, conduct stability data assessments, manage release status and trigger customer specific work-flows in cold chain processes.	
Case dimension weight	ABS plastic material 100 × 65 × 19 mm (3.9 x 2.5 x 0.7 in) / Cable tail incl. M8 connector 85 mm 134 g (4.7 oz)	